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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/781,466	02/17/2004	Bo Su Chen	H0005002(1139.1154101)	1775
22913	7590	12/23/2004	EXAMINER	
WORKMAN NYDEGGER (F/K/A WORKMAN NYDEGGER & SEELEY) 60 EAST SOUTH TEMPLE 1000 EAGLE GATE TOWER SALT LAKE CITY, UT 84111			LEPISTO, RYAN A	
			ART UNIT	PAPER NUMBER
			2883	
DATE MAILED: 12/23/2004				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/781,466

Applicant(s)

CHEN, BO SU

Examiner

Ryan Lepisto

Art Unit

2883

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 February 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 6-13 is/are allowed.
- 6) ☒ Claim(s) 1,5,14 and 20-23 is/are rejected.
- 7) ☒ Claim(s) 2-4,15-19 and 24-27 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 February 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Drawings

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "130" has been used to designate both optical element (many occurrences) and optical axis (specification, page 6 line 12).
2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: 23 (optical axis; spec, page 8 line 6).
3. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action.

Claim Objections

4. Claim 23 is objected to because of the following informalities: The statement "...light that is reflected by detector...", should read "...light that is reflected by [a or the or said] detector..". Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. **Claims 1, 5 and 23** are rejected under 35 U.S.C. 102(e) as being anticipated by **Steinberg et al (US 2003/0138210 A1)** (Steinberg).

Steinberg teaches a device to deliver a collimated output having low back reflections (Fig. 1, 3 & 5) comprising a lens and block section (29 with 36) having a flat side (30) and a convex side (curved surface of 36), output devices (66a-b), which can be detectors (paragraph 0029) spaced apart from the lens and block section (29 with 36), an optical fiber (24) positioned adjacent and abutting to the flat side (30) of the lens and block section (29 with 36) that propagated a signal from a light source (42) (which can be a laser (paragraph 0019)) wherein the lens and block section (29 with 36) is adapted to direct light delivered by the fiber (14) to the output devices (66a-b) does not substantially couple back into the fiber (14) (paragraphs 0014 and 0028). This is done by providing light from the source (42) and directing the light so the light does not substantially couple back to the source (paragraphs 0014 and 0028).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. **Claims 14 and 20-22** are rejected under 35 U.S.C. 103(a) as being unpatentable over Steinberg.

Steinberg teaches a device to deliver a collimated output having low back reflections (Fig. 1, 3 & 5) comprising a lens and block section (29 with 36) having a flat side (30) and a convex side (curved surface of 36), output devices (66a-b), which can be detectors (paragraph 0029) spaced apart from the lens and block section (29 with 36), an optical fiber (24) positioned adjacent and abutting to the flat side (30) of the lens and block section (29 with 36) that propagated a signal from a light source (42) (which can be a laser (paragraph 0019)) wherein the lens and block section (29 with 36) is adapted to direct light delivered by the fiber (14) to the output devices (66a-b) does not substantially couple back into the fiber (14) (paragraphs 0014 and 0028). This is done by providing light from the source (42) and directing the light so the light does not substantially couple back to the source (paragraphs 0014 and 0028).

Steinberg does not teach expressly the output light being coupled to a detector where less than half of the light is reflected back to the light source or a light emitting diode (LED) source.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to infer that less than half of the light is reflected back in the coupler taught by Steinberg since the purpose of the invention is to reduce back reflections and since it was known in the art that a reduced back reflection system is a system that has achieves less than half of the light being back reflected.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to use and reasonable light source in the coupler as taught by Steinberg including an LED since lasers, LEDs, lamps, etc where well known in the art to be acceptable lights sources.

The motivation for doing so would have been to reduce cost of the coupler by using an LED verses a more expensive laser and by reducing power consumption by using a lower power device like an LED.

Allowable Subject Matter

7. **Claims 6-13** are allowed.
8. The following is a statement of reasons for the indication of allowable subject matter:

With regard to independent claims 6 and 9: These claims are allowable over the prior art of record because the latter, either alone or in combination, does not disclose nor render obvious a light pattern from the optical lens element that has a substantially reduced intensity near the center of the light pattern, in combination with the rest of the claimed limitations.

9. **Claims 2-4, 15-19 and 24-27** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

These claims would be allowable over the prior art of record if rewritten in independent form including all of the limitations of the base claim and any intervening claims because the latter, either alone or in combination, does not disclose nor render obvious a at least partial annular shaped light pattern on the detector, a light from the optical lens element being non defocused on the detector or the optical lens element having a focal point in front or behind the detector, in combination with the rest of the claimed limitations.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Turpin et al (GB 2 178 554 A) teaches a plano-convex beam termination and fiber system.
- Steinburg et al (US 2003/0067049), Karube et al (US 2003/0113231), Ukrainczyk et al (US 2003/0053751), Bhagavatula et al (US 2004/0126059), Liu (US 6,469,835) teach a fiber, plano-convex lens and detector system but no teaching of reducing back reflections.

- Kathman et al (US 2003/0072526) & (US 6,496,621) and Coleman et al (US 6,822,794) teach a fiber coupler for reducing back reflections with fiber, lens and wafer that creates an annular light output.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ryan Lepisto whose telephone number is (571) 272-1946. The examiner can normally be reached on M-F 7:30AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank Font can be reached on (571) 272-2415. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Ryan Lepisto

Art Unit 2883

Date: 12/13/04

Frank Font

Supervisory Patent Examiner

Technology Center 2800

Signing for
FRANK FONT
Brian Healy
Primary Examiner